

1. A telephone handset having a front surface with a display and a keypad, wherein said keypad includes a group of keys for entering alphanumeric signs and a key for navigating a cursor in the display,

-said navigation key is placed in the front surface of the phone between the display and the group of alphanumeric keys,

-said navigation key includes a roller body which extends partly through an opening in the front surface of the phone, and which is essentially cylindrical with a length and diameter of the same size as the width of the keys in said group of keys for entering alphanumeric signs.

2. A telephone handset according to claim 1, wherein the axis of rotation of the roller extends perpendicularly to the longitudinal axis of the phone.

3. A telephone handset according to claims 1, wherein the keys in said group of keys for entering alphanumeric signs are arranged in three columns each having four keys, and said navigation key is placed as an extension of the central column.

4. A telephone handset according to claims 1, and furthermore comprising:

-a first detection means for detecting the rotation of the roller and for providing a first control signal for the controller,

-a second detection means for detecting the depression of the roller and for providing a second control signal for the controller, and

-said controller moving the cursor between items displayed in the display in dependence on the first control signal and selecting an item pointed out by the cursor in dependence on the second control signal.

5. A telephone handset according to claims 1, wherein the length of said navigation key is of the order of 6-14 mm, and the maximum diameter of the roller body is of the order of 6-12 mm.

6. A telephone handset according to claim 1, wherein the structure of the navigation key for providing control signals in dependence on the operation thereof, comprises:

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- a roller body acting as a navigation key;
- a carrier for carrying said roller body;
- a supporting means supporting said carrier;
- said carrier being hinged relatively to the supporting means by cooperating hinging parts;
- biasing means for urging the carrier and the supporting means away from each other at a distance from said hinging parts; and
- detection means for detecting a force counteracting the biasing force provided by said biasing means and for providing a second control signal in dependence thereon.

7. A telephone handset according to claim 6, wherein the carrier furthermore carries an encoder means aligned with the roller body for detecting the rotation of said body and for providing a first control signal in dependence thereon.

8. A telephone handset having a front surface with a display and a keypad, wherein said keypad includes a key for navigating a cursor in the display controlled by a control unit,

- said navigation key is provided as a depressable roller body,
- said control unit receives a first input signal representing the rolling of the roller body and a second input signal representing the pressing of the roller body for moving the cursor between items in the display and for selecting an item pointed out by the cursor, respectively; and
- said processor displays a list of available operations in the display upon pressing of the roller body when the handset is in idle mode.

9. A telephone handset according to claim 8, wherein the items contained in the displayed list may be specified by the user.

10. A telephone handset according to claim 9, wherein the user may copy operations and applications available from the standard menu structure of the phone into the user-defined list.

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11. A navigation key structure for providing control signals in dependence on the operation thereof, and comprising:

- a roller body acting as a navigation key;
- a carrier for carrying said roller body;
- said carrier being supported by supporting means;
- said carrier being hinged relatively to the supporting means by cooperating hinging parts;
- biasing means for urging the carrier and the supporting means away from each other at a distance from said hinging parts; and
- detection means for detecting a force counteracting the biasing force provided by said biasing means and for providing a control signal in dependence thereon.

12. A navigation key structure according to claim 11, wherein the carrier comprises a shaft part retained between two plate-shaped end parts, said roller body is arranged rotatably on said shaft part, and said end parts are furthermore adjoined by at least one beam-shaped leg part extending along the shaft part.

13. A navigation key structure according to claim 12, wherein the carrier comprising said shaft part, said two plate-shaped end parts and said at least one beam-shaped leg part provides a stiff structure.

14. A navigation key structure according to claim 13, wherein the carrier comprises two leg parts in parallel with the shaft part, and the hinge part of the carrier extends outwardly from one of said leg parts.

15. A navigation key structure according to claim 12, wherein the roller body is shaped as a barrel having a through bore for pivotal reception of said shaft part.

16. A navigation key structure according to claim 14, wherein the roller body is provided with a cam-shaped disc member for cooperation with a spring member

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fixed to said shaft part, thereby defining a number of discrete positions allowable during the revolution of the roller body.

17. A navigation key structure according to claim 16, wherein the diameter of the through bore of the roller member expands at one end of the member for providing an internal chamber in the roller body containing said cam-shaped disc member and said spring member.

18. A navigation key structure according to claim 17, wherein said cam-shaped disc member is received in the through bore of the roller member and acts as end wall for said chamber, said disc member being provided with a central opening for the shaft part.

19. A navigation key structure according to claim 11, wherein the carrier furthermore carries an encoder means aligned with the roller body for detecting the rotation of said body and for providing a control signal in dependence thereon.

20. A navigation key structure according to claim 18, wherein the outer surface of the disc-shaped member is provided with a pattern readable by the encoder means.

21. A navigation key structure according to claim 20, wherein the outer surface of the disc-shaped member is provided with a pattern which is readable by the encoder means.

22. A front cover for a phone having an opening through which keys of a keypad extend, the back side of said front cover being furthermore provided with gripping means to allow, in cooperation with the printed circuit board of the phone, a separate navigation key structure to be depressed to perform a swing movement around the hinge axis defined by the gripping means.

23. Use of a roller key structure placed between a display and a group of alphanumeric keys as a navigation key for a cursor in a display of a cellular or

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cordless phone, wherein the size of the part of said roller key that extends through the front cover of the phone corresponds to the general size of the keys in the group of alphanumeric keys.

24. An encoder unit for use in a telephone handset having a navigation key which is provided as a roller body, said roller body being provided with a pattern which is readable by the encoder unit, and said roller body being allowed to adopt a predetermined number of valid states, wherein, upon detection of a change of state for said roller body, the encoder unit actively checks whether the detected change of state is valid.

25. An encoder unit according to claim 24, wherein the pattern provided on the roller body is provided as metallic areas on an insulating surface, and the encoder unit is provided with a number of sliding shoes sliding over the pattern upon turning of the roller body.

26. An encoder unit according to claim 25, wherein the detected contact between the sliding shoes and the pattern is validated by successively testing the contact between the sliding shoes and the pattern one by one, said testing being performed by applying a signal to one of the sliding shoes and detecting the response on the other sliding shoes.

27. An encoder unit according to claim 26, wherein the encoder unit has three sliding shoes.

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